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MARKETING SPREADS FOR WHITE BREAD

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MARKETING SPREADS FOR WHITE BREAD 1/

The consumption of bread per person has been declining for many years, but only a few foods have a greater retail value in the farm-food market basket.

In 1963 the average retail price of a 1-pound loaf of white bread was at an all-time high of 21.6 cents--0.4 cent higher than the 1962 price and 60 percent higher than the 1947-49 average (table 11). Consumers paid more for bread each year during 1947-63 than in the preceding year. The increase of 1.9 percent in 1963 was smaller than the average annual increase of 3.5 percent since 1947.

Farm-Retail Spread Increases

The difference between the retail price and farm value of all ingredients used in producing a 1-pound loaf of white bread (the marketing or farm-retail spread) increased to 18.5 cents in 1963 from 18.1 cents in 1962 (table 11). 2/ The farm-retail spread in 1963 was about four-fifths larger than the 1947-49 average. The farm-retail spread increased each year throughout the 1947-63 period. Increases in the last 3 years were smaller than those in most earlier years; 1963 showed the third smallest increase--2.2 percent. Although all segments of the farm-retail spread increased during 1947-63, the baker-wholesaler's spread accounted for most of the increase in the total spread and in the retail price.

Small Increase in Baker-Wholesale Spread Since 1959

The slackened upward movement evidenced since 1959 in the baker-wholesale spread continued in 1963. The annual average spread increased 0.3 cent above the 1962 figure, to 11.8 cents for a 1-pound loaf. This was less than the average annual increase since 1947 of 0.4 cent.

The 0.3 cent increase in the baker-wholesale spread was accompanied by a rise of 0.2 cent in the wholesale price of white bread in 1963 and a 0.1 cent decline in cost of ingredients to the baker.

The wholesale price of a 1-pound loaf of white bread increased to 17.4 cents in 1963 from 11.1 cents in 1947-49. At the same time the cost of all ingredients to the baker increased to 5.6 cents from 5.1 cents. Thus, the baker-wholesale spread was 5.8 cents larger in 1963 than in 1947-49 (fig. 1). This spread accounted for 72 percent of the increase in the farm-retail spread. The baker-wholesale spread as a share of the retail price increased to 55 percent in 1963 from 44 percent in 1947-49.

Some Factors Influencing Baker-Wholesale Spread

Labor costs, including fringe benefits, represented about 51 percent of the baker-wholesaler's spread in 1961, according to the most recent cost analyses available. 3/ Packaging and wrapping material expenses accounted for about 12 percent; delivery expenses, other than wages and salaries, for 9 percent; advertising and items bought for resale, for about 8 percent; and other costs and profits, for the remaining 20 percent.

Labor costs have been a major factor influencing increases in the baker-wholesale spread. This cost increased to 6 cents per pound loaf in 1961 from 2.2 cents in 1945 and accounted for about

1/ Prepared by J. C. Eiland, agricultural economist, Marketing Economics Division, Economic Research Service, USDA.

2/ The farm value is the payment farmers receive for the farm products equivalent to a pound loaf of bread.

3/ Marketing Margins for White Bread, Misc. Pub. 712, U. S. Dept. Agri. revised Nov. 1962, table 3, p. 12.

Table 11.--White pan bread: Estimated retail and wholesale prices of a 1-pound loaf, retailers', baker-wholesaler's, miller's and other spreads, and estimated farm value of ingredients, average 1947-1949, annual 1950-1963, and quarterly 1962-1963. 1/

Year and quarter	Retail price 2/	Retail spread 3/	Wholesale price 4/	Baker-wholesaler spread 5/	Cost to baker: All ingredients 6/	Cost to baker: Flour 7/	Mill sales value of flour 8/	Miller's flour spread 9/	Cost of wheat to miller 10/	Other spreads 11/	Farm value: Wheat 12/	Farm value: All ingredients 13/
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1947-49 average...	13.5	2.4	11.1	6.0	5.1	3.5	3.4	0.6	2.8	1.2	2.7	3.3
1950	14.3	2.7	11.6	6.9	4.7	3.4	3.3	.6	2.7	1.1	2.5	3.0
1951	15.7	2.7	13.0	7.8	5.2	3.6	3.4	.6	2.8	1.3	2.6	3.3
1952	16.0	3.0	13.0	8.1	4.9	3.5	3.4	.6	2.8	1.1	2.6	3.2
1953	16.4	2.9	13.5	8.4	5.1	3.7	3.5	.6	2.9	1.4	2.5	3.1
1954	17.1	2.7	14.4	8.9	5.5	4.0	3.8	.6	3.2	1.6	2.7	3.3
1955	17.5	2.6	14.9	9.5	5.4	4.0	3.8	.6	3.2	1.6	2.7	3.2
1956	17.9	2.6	15.3	10.0	5.3	3.9	3.7	.7	3.0	1.4	2.6	3.2
1957	18.8	3.1	15.7	10.3	5.4	3.9	3.7	.8	2.9	1.4	2.6	3.2
1958	19.3	3.1	16.2	10.9	5.3	3.9	3.6	.8	2.8	1.6	2.3	2.9
1959	19.7	3.1	16.6	11.5	5.1	3.8	3.5	.8	2.7	1.5	2.3	2.8
1960	20.3	3.4	16.9	11.6	5.3	3.9	3.6	.9	2.7	1.6	2.3	2.8
1961	20.9	3.8	17.1	11.7	5.4	4.0	3.7	1.0	2.7	1.5	2.4	2.9
1962	21.2	4.0	17.2	11.5	5.7	4.3	4.0	1.0	3.0	1.6	2.6	3.1
1963 14/	21.6	4.2	17.4	11.8	5.6	4.1	3.9	1.0	2.9	1.5	2.5	3.1
1962:												
Jan.-Mar.	21.1	3.9	17.2	11.7	5.5	4.1	3.8	.9	2.9	1.6	2.5	3.0
Apr.-June	21.1	3.9	17.2	11.6	5.6	4.2	4.0	.9	3.1	1.5	2.7	3.2
July-Sept.	21.2	4.1	17.1	11.3	5.8	4.4	4.2	1.2	3.0	1.4	2.6	3.2
Oct.-Dec.	21.2	3.9	17.3	11.6	5.7	4.3	4.0	1.0	3.0	1.6	2.6	3.1
1963:												
Jan.-Mar.	21.6	4.2	17.4	11.8	5.6	4.2	3.9	.9	3.0	1.5	2.6	3.2
Apr.-June	21.6	4.2	17.4	11.7	5.7	4.2	3.9	1.0	2.9	1.5	2.6	3.2
July-Sept.	21.6	4.2	17.4	12.0	5.4	3.9	3.6	.9	2.7	1.7	2.3	2.8
Oct.-Dec.	21.6	4.2	17.4	11.7	5.7	4.1	3.9	1.0	2.9	1.6	2.5	3.1

1/ The retail price, farm value, and farm-retail spread for the years 1919-56 were published in Farm-Retail Spreads for Food Products, U.S. Dept. of Agr., Misc. Pub. 741, Nov. 1957, p. 117. Comparable data for the other series in this table are not available for the years before 1947. 2/ Average of retail prices in urban areas reported by Bureau of Labor Statistics, with adjustments for 1954 and 1955. 3/ Spread between retail and wholesale prices. 4/ Derived from wholesale prices published by the Bureau of Labor Statistics and trade data. 5/ Spread between wholesale price and cost to the baker of all ingredients. 6/ Cost of flour, shortening, nonfat dry milk, sugar, and other ingredients in a pound of bread, adjusted to level of cost to baker as reported in the Census of Manufactures. 7/ Weighted average wholesale value of 0.641 lb. of several types of bread flour in 3 markets, adjusted to the level of cost to baker as reported in the Census of Manufactures. 8/ Weighted average wholesale value of 0.641 lb. of several types of bread flour in 3 markets, adjusted to mill sales level as reported in the Census of Manufactures. 9/ Spread between sales value of flour and cost of wheat to miller. 10/ Weighted average wholesale value in 6 markets of major classes and grades of wheat used for milling bread flour, adjusted to level of cost to miller as reported in the Census of Manufactures and further adjusted to eliminate imputed value of millfeed products. 11/ Spread or charges for transporting, handling, and storing all ingredients and for processing ingredients other than flour. This spread is a residual figure. 12/ Returns to farmers for wheat less imputed value of millfeed by products, based on average local market prices received by farmers for all wheat; return for 0.882 lb. since July 1957, and 0.894 lb. before that date. 13/ Value at prices received by farmers, less byproduct allowances, for the quantity of wheat and other farm products yielding ingredients used in a pound loaf of white bread. 14/ Preliminary.

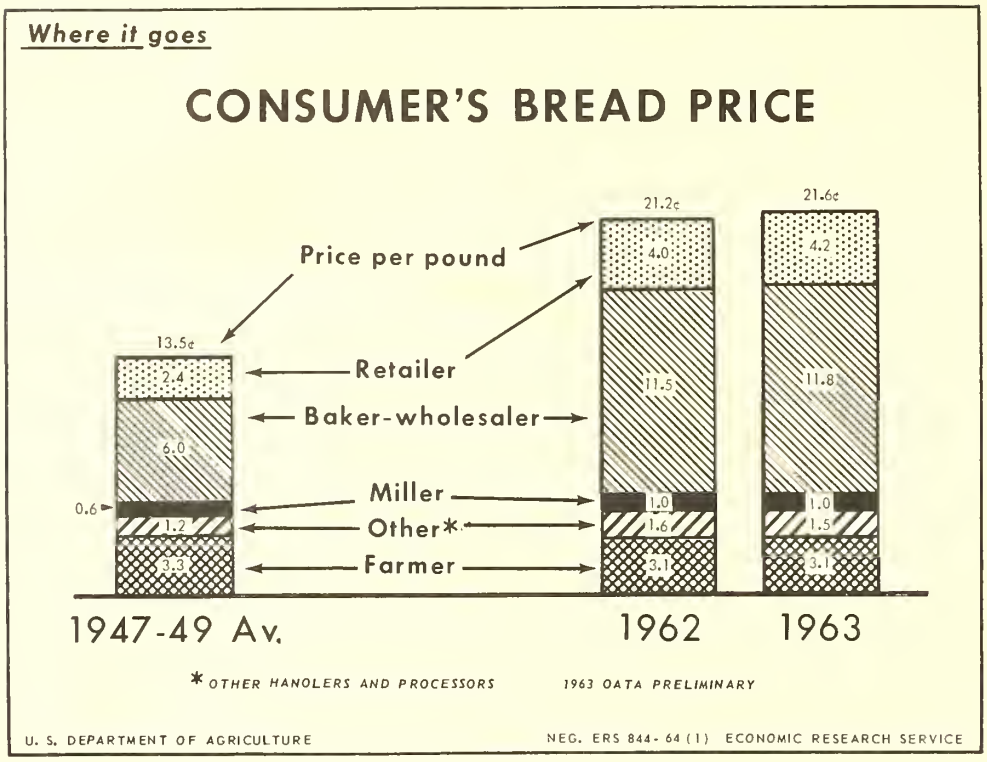

Figure 1

52 percent of the total increase in the baker-wholesale spread (table 12). It includes all personnel costs including officers' salaries. Relative to their 1945 levels, costs of all labor per 1-pound of bread have risen by about the same rate as all other costs in the aggregate (not including profits) but slightly more than the baker-wholesale spread and more than 3 times the rise in net profit per loaf of bread.

Although the baking industry has experienced stable demand for its products and dollar sales have increased per bakery, the increase in production and distribution costs has exceeded the rate of increase in sales. Much of the increase in sales, however, has resulted from increased product prices, so the physical volume of products has increased only moderately for the industry and per plant. (The number of bakeries declined about 12 percent from 1947 to 1958.) But total costs of operation have increased much faster than physical output, thus contributing to increased spreads for bakery products.

Factors affecting increased labor costs.--Hourly earnings of production and related workers in the bread and related products industry rose 70 percent from an estimated average of $1.35 in 1951 to $2.30 in 1962 (table 13). Other labor costs in the form of fringe benefits and social security taxes showed even greater proportionate increases.

Dollar sales of the industry, however, increased a little more than production labor costs. Consequently, the cost of production labor, as a percentage of total sales, decreased slightly between 1947 and 1962. (This cost does not include employers' contributions to social security,

Table 12.--Items in the baker-wholesale spread for a 1-pound loaf of white bread 1945 and 1961

Item	Amount per loaf		Change, 1961 from 1945	
	1945	1961	Actual	Percentage of total change
	Cents	Cents	Cents	Percent
Salaries, wages, and fringe benefits	2.2	6.0	3.8	52
Packaging and wrapping material	.5	1.4	.9	13
Delivery other than personnel costs	.4	1.0	.6	9
Advertising, promotion and products bought for resale	.2	.9	.7	9
Other costs	.9	2.1	1.2	16
Profits after taxes	.2	.3	.1	1
Baker-wholesale spread	4.4	11.7	7.3	100

Based on data for 18 multiple-unit and 18 single-unit wholesale bakeries presented in Costs and Margin Trends in the Baking Industry, Senate Committee on Agriculture and Forestry report, May 1, 1957; prices and marketing spreads for white bread, published regularly by USDA; and trends in profits of 6 leading bakery companies.

Table 13.--Hourly earnings of production workers in the bread and other bakery products industry, annual averages, 1951-62.

Year	Actual earnings including overtime 1/	Index (1951 = 100)
	Dollars	
1951	1.35	100
1952	1.44	107
1953	1.52	113
1954	1.60	119
1955	1.67	124
1956	1.76	130
1957	1.84	136
1958	1.93	143
1959	2.03	150
1960	2.13	158
1961	2.23	165
1962	2.30	170

1/ Beginning with 1958, data given are from BLS and are based on the standard industrial classification of 1957. Before 1958, data are based on the 1945 classification but are adjusted to make them comparable to the data for 1958 and later years.

pension plans, group insurance, and workmen compensation.)

The quantity of bread and other bakery products produced per man-hour of production labor increased about 16 percent from 1947-49 to 1962, according to an analysis of data from the Census of Manufactures. (In contrast, output per man-hour in all nonagricultural industries increased by an average of 47 percent.) 4/ Hourly earnings of production labor increased about 105 percent from 1947-49 to 1962. This indicates an increase of approximately 75 percent in cost of production labor per pound of product.

The output of "nonproduction workers" has decreased significantly since 1947. 5/ This, coupled with increased earning of these employees, has caused a larger increase in the cost of this labor per unit of product than for production labor. Much of this decline in productivity and increase in costs of nonproduction labor--which amounted to over 50 percent of all labor costs in 1958--resulted from the sales and distribution problem: (1) A decrease in the weekly volume of bakery products distributed per route, (2) a decline in dollar sales per route mile, and (3) the change to a 5-day from a 6-day work week, which added to the number of salesmen for a given number of routes. 6/

Sales and Profits of 6 Baking Companies

Profits (after taxes) of 6 major baking companies declined from an average of 4.1 percent of sales in 1947-49 to 1.1 percent in 1962 (table 14). Total sales of these 6 companies rose almost steadily from 1947-49 to 1962. The 1962 total more than doubled the 1947-49 average--a faster rate of growth than that for the entire industry.

Taxes took less than half the net income of these companies until 1951, when taxes then amounted to more than half. Since then, taxes have consistently taken the larger share.

Retail Spread Increases

The retail-store spread set an all-time high, in 1963, averaging 4.2 cents per 1-pound loaf of bread, 0.2 cent higher than in 1962. This was the fourth consecutive increase since 1959. It accounted for about half of the rise in the retail price in 1963 (table 11).

The retail spread climbed about 1.8 cents between 1947-49 and 1963 (table 11 and fig. 1). Fluctuations occurred in the annual retail spread mainly because retail price increases lagged behind wholesale price increases. Often, wholesale price advances were in fractions of a cent, but most retail prices were not quoted in fractions. Thus, the retailer generally had to increase his price a full cent or absorb the wholesale rise.

Increases in the retail spread from 1947-49 to 1963 accounted for 22 percent of the rise in the farm-retail spread. The retailer's share of the retail price fluctuated from 15 to 19 percent.

Flour Mill Spread

The flour mill spread in 1963 was 1.0 cent per 1-pound loaf of bread, the same as in 1961 and 1962, a high for the period 1947-63. It was 0.4 cent above the 1947-49 average and accounted for about 5 percent of the retail price, about the same proportion as in 1947-49.

Until the mid-1950's the cost of wheat to the miller and mill sales value of

4/ Economic Report of the President, January 1964, p. 245.

5/ Employees not classified as production and related workers, according to Census terminology, include those who do sales, administrative, and professional work and clerical work not directly related to the production line records.

6/ The industry has recognized the importance of the sales and distribution problem. The USDA is devoting a research project to appraising present methods of delivery operations.

Table 14.--Sales and profits of 6 baking companies, 1947-62 1/

Year ended December 31	Sales	Total net income		Net income as a percentage of sales	
		Before tax	After tax	Before tax	After tax
	Mil. dol.	Mil. dol.	Mil. dol.	Percent	Percent
1947-49 average	535.7	35.5	21.9	6.6	4.1
1947	513.8	30.5	18.6	5.9	3.6
1948	559.6	42.3	26.0	7.6	4.7
1949	533.6	33.6	21.0	6.3	3.9
1950	553.9	37.7	21.4	6.8	3.9
1951	610.9	35.9	17.1	5.9	2.8
1952	641.6	39.0	17.8	6.1	2.8
1953	685.8	40.3	18.7	5.9	2.7
1954	709.5	36.1	18.1	5.1	2.5
1955	764.8	43.7	21.5	5.7	2.8
1956	840.3	44.9	21.8	5.3	2.6
1957	904.0	47.9	23.4	5.3	2.6
1958	933.4	47.0	23.1	5.0	2.5
1959	1,011.8	47.8	23.4	4.7	2.3
1960	1,086.6	43.3	21.0	4.0	1.9
1961	1,087.9	29.2	13.9	2.7	1.3
1962	1,121.7	25.6	12.9	2.3	1.1

1/ To make data comparable throughout, 7 companies are included prior to 1953 when 2 of the companies merged.

Compiled from "Moody's Industrial Manual" and company annual reports.

flour varied closely together, resulting in a stable mill spread per loaf when rounded to one-tenth of a cent. Since then, the cost of wheat to the miller has declined and the value of flour has increased (table 11).

Factors affecting milling spread.--Production labor costs per unit of flour were about 25 percent higher in 1960 than the 1947-49 average. Other labor costs increased more than production labor costs.

Total labor costs in 1958 were about 7 percent of the value of shipments according to Census data. This was nearly 0.3 cent per 1-pound loaf of bread equivalent and about one-third the flour mill spread. Thus, a rise of 25 percent in labor costs per unit of product was influential in increasing the flour miller's spread.

Since the mid-1950's, there has been an uptrend in flour extraction rates. Mills in 1962 recovered about 1.5 pounds more flour per hundredweight of wheat milled than in 1955. This change reduced slightly the quantity of wheat required to produce a 1-pound loaf of bread.

Profits of 4 Major Milling Companies

Profits as a percentage of sales for 4 major milling companies have increased since the mid-1950's. 7/ Earnings have risen along with the increase in the mill spread. Net profits after taxes per dollar

7/ Marketing and Transportation Situation, ERS, USDA, MTS-151, Nov. 1963, table 7, page 15.

of sales in 1950 were 3.1 cents--the same as in 1945-49. Profits in the early 1950's declined to 2.3 cents and then increased gradually to 3.7 cents in 1963. These companies produced other products besides flour, so profits did not come entirely from flour milling.

Other important trends have also been occurring. In 1962, there were 282 mills with daily capacity in excess of 400 hundredweight, down from 426 in 1946. Total flour production was down slightly. But flour produced per mill increased nearly 50 percent, and the proportion of plant milling capacity utilized was 92 percent in 1962, up from 77 percent in 1946.

Other Marketing Spreads Increase

Other marketing spreads amounted to 1.5 cents in 1963, 0.1 cent smaller than in 1962 and 0.3 cent above the 1947-49 average (table 11 and fig. 1). 8/ These spreads accounted for 7 percent of the retail price in 1963 compared with 9 percent in 1947-49.

Farm Value of Ingredients Unchanged in 1963

The farm value of all farm-originated ingredients used in a pound of white bread was 3.1 cents in 1963--the same as in 1962, but 0.2 cent below 1947-49. The farmer received about 14 percent of the average retail price in 1963 compared with 24 percent in 1947-49 (table 11).

The farm value of the wheat equivalent to a pound of bread was 2.5 cents in 1963, down 0.1 cent from 1962 and 0.2 cent (7 percent) below 1947-49. During 1947-49 the wheat farmer received 20 percent of the retail price; in 1963 he received about 12 percent of a higher retail price.

8/ For transporting, handling, and storing all ingredients and for processing ingredients other than flour.